Council of Medical Research (ICMR) a team of Japanese Researcher Hiroshi Kiyono at Tokyo University found a way of genetically engineering a strain of rice. It contains a vaccine against cholera capable of inducing antigen specific immune responses in both systemic and mucosa compartments without the use of syringe and needle. The work is preliminary having been tested only in mice. As per researches more basic studies are needed to test the vaccine in a primate.

(c) The rice-based cholera vaccine was created by inserting the genetic material from the cholera bacterium into the sequenced genome of the rice plant. The researchers used two types of rice plants to generate the vaccine: Kitaake, which produces normal rice, and Hosetsu, which produces warf-type rice. The rice plant Oryza sativa is a common species in India also. The rice plants would also have to be grown under carefully controlled conditions to ensure appropriate vaccine production.

(d) It will depend on successful clinical trials of the Vaccine.

(e) It is anticipated that the initial costs of genetically engineering rice to produce a cholera vaccine will be nominally high but on a per dose basis the cost would be very very low. The vaccine will not require refrigeration, nor a needle.

Supply of blood through blood banks

677. SHRI RAJKUMAR DHOOT: Will the Minister of HEALTH AND FAMILY WELFARE be pleased to state:

(a) whether it is a fact that supply of blood through blood banks of Delhi hospitals are controlled by middlemen and brokers as per media reports;

(b) if so, the details thereof and the reaction of Government thereto;

(c) the steps proposed to be taken to ensure proper supply of blood to needy patients without falling prey to brokers and middlemen; and

(d) the action taken against hospital staff engaged in the malpractices?

THE MINISTER OF STATE IN THE MINISTRY OF HEALTH AND FAMILY WELFARE (SHRIMATI PANABAKA LAKSHMI): (a) and (b) No, Sir. The Blood in Delhi hospitals is supplied through authorised personnel in Blood Banks only and the proper documentation of the same is maintained as per provisions laid down in the Act.

(c) and (d) In order to ensure proper supply of blood in blood banks, Government of India is taking following steps:

(i) Augmentation of Voluntary Blood Donation through about 45000 voluntary blood donation camps annually.

(ii) Professional Blood Donation is banned in the country since 1st January 1998.

(iii) Support to 1230 Blood banks in the country to maintain quality standards in Blood bank practices.

(iv) The Drug Inspector at the State Drug Authority visits the blood bank to ensure that the standards laid down for Blood banks are maintained.

(v) The State Blood Transfusion Council reviews the Blood Transfusion Services in the blood banks and on receipt of any complaint of this nature, suggests action to State Drug Authority accordingly.

(vi) As per the recent amendment in the Drugs and Cosmetics Act/Rules, no 'Stand-alone Blood Bank' in the private sector will be licensed to operate and the State Drug Authority will issue license to the Blood Banks only on the recommendations of the State Blood Transfusion Council.

(vii) The Medical Superintendents of hospitals review the functioning of practices in blood banks and take corrective action from time to time at their level to ensure that only Blood bank staff and Blood Donors are allowed to enter in Blood bank premises.

AIDS control programme

678. SHRI JANARDHANA POOJARY: Will the Minister of HEALTH AND FAMILY WELFARE be pleased to state:

(a) whether the number of HIV-positive people in the country has been revised;

(b) if so, the details thereof, State-wise;

(c) the details of funds raised through loans and grants from international lending and donor agencies, budgetary allocations, etc., and amount spent on various AIDS related activities during the last three years, year-wise and activity-wise;

(d) the details of funds spent on conferences/seminars and overseas trips under AIDS programme during the last three years, year-wise and item-wise, with objectives of foreign trips; and

(e) the amount spent on these items in percentage terms in relation to the total funds under the AIDS programme?

THE MINISTER OF STATE IN THE MINISTRY OF HEALTH AND FAMILY WELFARE (SHRIMATI PANABAKA LAKSHMI): (a) and (b) Yes, Sir. The 2006 estimates released recently by the National AIDS Control Organisation, supported by UNAIDS and WHO, indicate that an estimated 2 million to 3.1 million people are living with HIV in the country. The State-wise number of HIV positive persons is given in the enclosed Statement-I (*See* below).

(c) and (d) The details are given in Statement-II (*See* below). The details regarding the activities and the expenditures incurred thereof are given in Statement-III (*See* below).

(e) The details are given in Statement-IV.